Public Health England

TURNING EVIDENCE INTO PRACTICE

Preventing drug-related deaths

Drug misuse is a major contributor to premature mortality.[1] People who use drugs are up to ten times more likely to die suddenly or as a result of chronic diseases than people who do not use drugs.[2]

Many of these deaths are preventable. This document provides a checklist for services and local areas that want to improve their practices in this area. The content is drawn from published evidence, authoritative guidance, and feedback from drug treatment services.

What is the issue?

Recorded rates of drug-related deaths[3] are higher in England than in most other European countries. This high number of drug-related deaths partly reflects the fact that the population of injecting drug users in England since the 'epidemic' of the 1980s is growing older. People with long histories of drug dependency are more likely to be in poor health and to engage in dangerous injecting behaviour, and are at greater risk of dying from overdose. Deaths often involve a combination of drugs as well as opioids, with alcohol and stimulants frequently mentioned on death certificates. Deaths involving new psychoactive substances (sometimes referred to as 'legal highs') have also increased in recent years.

Preventing overdose

Many drug overdose deaths are preventable. Ensuring appropriate practices are in place, along with the policies or protocols to support them, can prevent overdoses and subsequent fatalities.

Enhanced treatment engagement and continuity of treatment between services and relapse prevention interventions can reduce the risk of overdose.[4]

The substances most commonly mentioned on death certificates for overdoses are opioids, especially heroin. Overdose deaths mostly involve a combination of opioids and other drugs, such as benzodiazepines and alcohol, which can cause respiratory depression. Previous experience of overdose greatly increases the risk of a user dying from a later overdose. Injecting is particularly risky for fatal overdose.

Users may also overdose on new psychoactive substances (NPS), as NPS tend to contain a mix of unknown substances that can have unpredictable effects. There are also risks when NPS are used in combination with alcohol and other drugs.

Prompts

1. Do drug services, including needle and syringe programmes, provide service users with information and advice on the risk of overdose and the steps they could take to reduce that risk?
2. Do staff in drug treatment services have a good understanding of high-risk practices (eg, injecting, polysubstance use, alcohol use), high-risk groups (eg, users who have previously overdosed, older users, users with certain comorbid health problems) and high-risk stages (eg, the initial weeks of titration on to opioid substitution treatment, or the weeks following exit from treatment drug-free)? Does this understanding inform practice on how to reduce the risk of overdose?
3. Do services systematically assess the risk of overdose for every user attending structured drug treatment, and discuss with them the ways to reduce these risks?
4. Is a range of treatment options available to reduce risk, such as rapid assessment and treatment engagement for those at high risk; local access to supervised consumption of opioid substitution treatment; support for alcohol dependence and alcohol detoxification; support for safer injecting practices and to stop injecting; information and advice?
5. Do people leaving structured treatment have aftercare plans that include ongoing recovery check-ups? Is there a process for rapid re-entry to treatment and re-stabilisation if needed?
6. Are service users made aware of the available pathways back into treatment if they need to re-enter at any time?

North East Council on Addictions (NECA), Darlington

NECA works in partnership with Northern Engagement in Recovery from Addiction Foundation (NERAF) to deliver the Connected Recovery model. They use assertive outreach and assign a recovery coach to each service user to enhance engagement and retention, and provide peer support throughout their treatment.

The service has regular conversations and meetings with local pharmacy staff who often have contact with drug users who are not in structured treatment. This gives pharmacists and pharmacy support staff (who have a good relationship with NECA's lead nurse prescriber and service coordinator) the opportunity to discuss local practice and service developments, and to look at patterns of needle exchange provision and support. Hostel in-reach services provide drug users with advice on safer injecting practices and safe storage of medications while overdose prevention and harm reduction workshops are provided for people identified as high risk, wherever they are in the treatment system. Alert systems are also in place if service users fail to collect medication or they are intoxicated.

Responding to overdose

When an overdose occurs, a rapid first aid response (including the use of naloxone) can reduce the risk of the user dying. Services can also give other users, friends or family members information and training on how to respond, as they are often close by when people overdose.

Prompts

1. Do services provide their staff with information and training on recognising overdoses, calling emergency services and delivering basic life support?
2. Do services provide their service users and others (such as family and friends) with information on recognising overdose, calling emergency services and delivering basic life support?
3. Do services offer overdose training and naloxone to opioid users – including those on opioid substitution treatment, and those leaving treatment? Do they offer this to their families and friends?[5]
4. Do ambulance services routinely carry naloxone and are all paramedics trained to use it?
5. Do local stakeholders have the opportunity to share knowledge on overdoses and effective responses to them?
6. Do staff who work in local hostels used by drug users, or staff in other environments where overdoses may occur, have enough information and training on preventing and managing overdoses?

Brighton and Hove Drug and Alcohol Action Team (DAAT) and Sussex Partnership NHS Foundation Trust

Clinical records of opiate overdoses cases admitted to the Royal Sussex County Hospital A&E were cross-referenced with the drug and alcohol case management system. This highlighted that a significant proportion of A&E overdose patients were not engaged in treatment at the time of their overdose, so may not have had access to naloxone.

A&E is now dispensing naloxone to overdose patients and assertive outreach is being used to contact former service users and help them re-engage with treatment. Many people who overdose on opiates are primarily alcohol users, so naloxone is now being distributed to selected service users in alcohol treatment.

Reducing risks of prescribed medications

Opioid substitution medicines can be diverted from treatment for misuse by people who have never used opioids or have inadequate tolerance to their dangerous toxic effects. Such opioid medicines have also on occasions poisoned children. In both circumstances fatal overdose can easily happen. Other medicines prescribed to drug users that might be diverted and used inappropriately include pain medicines (eg, opioids or pregabalin), benzodiazepines and antidepressants. Local areas will want to consider the adequacy of measures to limit the risk of diversion and misuse.

Prompts

1. Do your services have agreed policies or protocols, and practices, that address:
    a. patients' safe use of their medicines
    b. safe storage of take-home medicines (including secure containers where appropriate)
    c. risks of diversion to other individuals
    d. risks of poisoning children from medicines at home
    e. added risks due to polysubstance and alcohol use
    f. suitable use of supervised consumption[6]
    g. services providing suitable information, advice and support to reduce the risks
2. Does the controlled drugs local intelligence network (CD LIN) that covers your commissioning area review the diversion and illicit use of opioid substitution treatment, other substance misuse medication, and other prescribed controlled drugs?
3. Are local systems in place to support people who require access to supervised consumption?
4. Are prescribing practices across your commissioning area regularly audited and reviewed?[7]

Reducing the risk from changing settings and stages of treatment

There is a significantly elevated risk of overdose for people in the immediate period after being released from prison.[8] Individuals are also at risk when leaving residential rehabilitation programmes or inpatient treatment, after completing a drug detoxification programme,[9] and after they stop using naltrexone.

Important steps to take in preventing overdose at times of change including promoting and supporting relapse prevention, offering pathways in to (or back in to) treatment when needed, and providing access to suitable aftercare

Prompts

1. Do local services provide rapid assessment for and access to opioid substitution treatment, particularly for high-risk people?[10]
2. Does your local partnership provide overdose awareness education for prisoners around the time of their release?
3. Is there a process for rapidly transferring service users between local prison(s) and community-based treatment services?

4. Does your area have processes for providing continuity of substitute prescribing for released prisoners, including rapid access to community prescribing and other services?[11]

5. Do commissioners and prison healthcare providers have arrangements to facilitate continuity of prescribing (particularly for opiates and benzodiazepines) for people who move from one area to another and after their release from prison?

6. Do services inform users that a loss of tolerance after detoxification and exit from residential rehabilitation programmes or inpatient treatment can increase the risk of overdose and death?

7. Do the care plans for people completing inpatient detoxification or residential rehabilitation incorporate transfer of care back to community services for continued structured treatment or for aftercare, or otherwise provide information on rapidly re-engaging with community treatment should it be needed?

8. After they have detoxified or left residential rehabilitation programmes or inpatient treatment, are patients given information on support networks and helped to engage with them?

9. Do local treatment services provide recovery check-ups (via regular phone calls or other means) for people who have left structured treatment? Do these cover people whose reduced tolerance leaves them at a high risk of overdose?

10. Do local treatment services work with other health and social care and criminal justice services used by drug users to identify those at risk, and to develop effective care pathways?

South Tyneside NHS Foundation Trust

South Tyneside NHS Foundation Trust Substance Misuse Service developed a care pathway, in consultation with staff at the Queen Elizabeth Hospital, to ensure that patients admitted with drug-related medical issues receive consistent advice and support in hospital and following their discharge to reduce the risks associated with moving between different settings and stages of treatment.

Service staff visit the hospital each day to check for drug-related admissions. These patients are given harm reduction advice and information on local services, and are referred where appropriate. If patients are already known to staff, their substance misuse practitioner is notified of the admission and a visit is arranged for a welfare check within 24 hours.

Reducing mortality risks from delayed or chronic drug-related health problems

Illicit drug use puts people at risk of developing long-term health complications that could lead to death. Injecting heroin, cocaine and other drugs can cause fatal conditions, such as the complications of deep vein thrombosis (DVT), serious tissue infections, blood-borne and other viral infections (particularly hepatitis C and B infections and HIV). Smoking drugs such as crack, heroin and tobacco can lead to life-threatening respiratory and cardiovascular disease. Fatal liver disease can arise from a combination of excessive alcohol use, polydrug use and viral hepatitis infection.

Prompts

1. Do services offer confidential testing for hepatitis C and HIV to all people who use drugs, including those currently injecting and or who previously injected drugs?

2. Do services promote testing and vaccination for hepatitis B virus infection?

3. Do services facilitate appropriate pre and post-test discussion with users about blood-borne virus infections and HIV, including the options for treatment referral?

4. Do services provide safer injecting advice to reduce the risk of local tissue damage and associated serious infections, deep vein thrombosis (DVT) and its complications, and the risks of contracting blood-borne virus infections through sharing needles, syringes or other drugs paraphernalia?

5. Do services give users information about the wider health harm associated with their drug use, including the respiratory and cardiovascular risks from smoking?

6. Do services provide advice on the long-term risks of polydrug and alcohol use?

7. Do services provide advice, referral and treatments to help users stop smoking?

Wirral Harm Reduction Unit

Safer injecting advice is given while users attend the syringe exchange and at a weekly safe injecting clinic. This advice covers observation and palpation of existing and previous injecting sites, type of equipment used, process of injecting (including sterilising equipment), problem solving when injecting ‘goes wrong’ (missed hits and no access), maintaining healthy sites by keeping them clean and accessible, recognising infected sites and their symptoms, and when rectal administration might be appropriate.

The safe injecting clinic relays alerts when contaminated heroin warnings are confirmed, provides blood-borne virus screenings, and facilitates access to other services (eg, sexual health).

Reducing mortality risks from new psychoactive substance and volatile substances

New psychoactive substances (NPS) and volatile substances can cause a wide range of harmful health effects and sometimes fatalities.

Drug services need to offer information and advice to users and other services on the effects and risks of these substances, and on how to reduce the risks. Other relevant services may also need to provide information and advice to NPS users. Services will want to keep abreast of information on local NPS use and prevalence and on volatile substance abuse. Developed systems for collecting, evaluating and disseminating information on new drugs and their harm can help local management of such risks (see 'Using local early warning systems and alert systems to enhance provision' below). These new substances are often used by people who do not form part of traditional treatment service groups.[12]

Prompts

1. Is information available in drug services, schools and youth services about the effects and risks and legal status of NPS and volatile substances for both staff and service users; and, in appropriate local services, for young people and their parents? Is this information regularly updated?

2. Do relevant partners (including drug treatment services, community youth groups and schools) work together to identify, respond and construct a coordinated response to the impact of local retail outlets which specialise in drug paraphernalia and legal highs ('head shops')?[13]

3. Do services provide advice on the particular risks of mixing stimulant substances with depressants (such as opioids, benzodiazepines and alcohol), and the risks of mixing multiple stimulants?

4. Does your local commissioning area have outreach services for young people that promote safer, healthier attitudes to reduce the risk from drug-taking behaviour in nightclubs?

5. Do relevant services give advice on how to reduce risk among those who abuse volatile substances?

6. Do services provide NPS users with information on more-specialised services and help them to access these services? Do they also host additional in-reach support?

7. Do the available services deliver advice and support to local NPS users who may not form part of traditional treatment service groups or who present with specific needs (such as 'clubbers', men who have sex with men, students, travellers or sex workers)?

Club Drug Clinic, Central and North West London NHS Foundation Trust
The Club Drug Clinic offers medically assisted withdrawal from substances and a range of community and in-patient detoxes, including polysubstance drug and alcohol detoxes and GHB/GBL detoxifications. The clinic also prescribes medication to aid stimulant withdrawal. Advice and support is provided by specialist addiction doctors and psychologists, nurses, counsellors, and peer mentors who have 'lived experience' and overcome similar problems.

On-site sexual health screening and support is available, as are liaison and referral for mental and physical health problems (including bladder and kidney, and HIV and other blood borne viruses).

Using local reviews of drug-related deaths to enhance provision

A robust review process that encourages different agencies to work together can help local areas learn more about the events leading up to drug-related deaths. It can also lead to suitable measures that might reduce the risk in future.[14]

This review process is commonly done through local providers' governance systems that incorporate drug-death reviews, or through partnership-level confidential inquiries of deaths (both processes involve specific evidence-gathering and analysis). Reviews can also be based on an ongoing analysis of statistical data and characteristics of local drug deaths over time.

Prompts

1. Does your local commissioning area have a system for identifying drug-related deaths?
2. Does your local commissioning area have an effective system for examining and learning lessons from drug-related deaths and for taking relevant action?
3. Does your local area have a system for reporting the outcome of local examinations of drug-related deaths?
4. Does your local area have a system for monitoring numbers and characteristics of drug deaths over time?
5. Does your local area have a common and consistent definition of 'drug-related deaths' for reporting and monitoring across agencies?
6. Are incidents of non-fatal overdose or 'near misses' fed into the confidential inquiry or drug-death review process?
7. Is there a link between the local drug-death review group and the corresponding controlled drugs local intelligence network (CD LIN)?
8. Are prescription opioid deaths reviewed as part of the local drug-related deaths review process?

Devon, Cornwall, Plymouth and Torbay Drug Action Teams
A south-west peninsula-wide database was introduced following liaison between Devon, Cornwall, Plymouth and Torbay, together with Devon and Cornwall police. Drug-related death information is shared by all the agencies a drug-user may have been in contact with. The coroner's close involvement means the group receives toxicology results within six weeks, and uses that information to identify patterns of deaths and to inform future action.

One case highlighted a breakdown in communication between the probation service and Cornwall treatment services. Since then, the probation and treatment service boundaries have been aligned and cover the same geographical areas. This has improved communication.

Using local early warning and alert systems to enhance provision

Local early warning and alert systems can quickly identify and share information about contaminated and adulterated drugs, changes in strength and formulation, new substances, and changing trends in substance use. Effective systems assess the quality of intelligence coming in and the levels of likely harm, and disseminate information accordingly without causing unnecessary alarm or information overload.

Prompts

1. Do local services and commissioning areas have a system for receiving and acting on national, regional or local reports of potentially dangerous substances or practices?

2. Are there clear points of contact for such alerts?

3. Is there effective local partnership working in an agreed system of process and paperwork that enables partnerships and treatment services to verify and assess intelligence about drug dangers?

4. Do local early warning and alert systems use standardised formats to record and process intelligence and to distribute information systematically? Does this include confirmed alerts?[15]

5. Do treatment and other services participate in local intelligence networks and have other mechanisms in place to exchange information with and disseminate advice to staff, service users and other health and social care and criminal justice services?

6. Is information from early warning and alert systems shared with local confidential inquiry or drug-death review processes?

Southampton Drug Action Team
Southampton Drug Action Team created a drug warning partnership. The local service user advocacy service, MORPH (part of Southampton Voluntary Services), works as a single point of contact to maintain a local, centralised and collaborative approach, which ensures quality and trust in the dissemination of important information.

When a drug warning is received by any drug warning partnership participant, this information is sent to MORPH. They then consult with appropriate partners to check the accuracy and relevance of the warning and consider the impact of further action. A consensus among the partnership is then agreed. If necessary MORPH designs, publishes and disseminates a warning to all partners for display in their services. This ensures reliable messages are presented in a consistent way.

Other briefings in the 'Turning evidence into practice' series:

- Helping service users to access and engage with mutual aid [NTA, 2013]
- Helping service users to engage with treatment and stay the course [PHE, 2013]
- Biological testing in drug and alcohol treatment [PHE, 2013]
- Optimising opioid substitution treatment [PHE, 2013]

References

[1] Murray C, et al. UK health performance: findings of the Global Burden of Disease Study 2010. The Lancet 2013;381: 997–1020

[2] Darke S, et al. Mortality amongst illicit drug users. Cambridge: Cambridge University Press; 2006.

[3] Office for National Statistics. Deaths related to drug poisoning in England and Wales, 2012. London: ONS; 2013.

[4] Department of Health (England) & devolved administrations. Drug misuse and dependence: UK guidelines on clinical management. London: Department of Health (England), the Scottish Government, Welsh Assembly Government and Northern Ireland Executive; 2007.

[5] National Treatment Agency for Substance Misuse. The NTA overdose and naloxone training programme for families and carers. London: NTA; 2011.

[6] Strang J, et al. Impact of supervision of methadone consumption on deaths related to methadone overdose (1993-2008): analyses using OD4 index in England and Scotland. British Medical Journal 2010;341:c4851.

[7] Recovery Orientated Drug Treatment Expert Group. Medications in recovery: re-orientating drug dependence treatment. London: National Treatment Agency for Substance Misuse; 2012.

[8] Farrell M, Marsden J. Acute risk of drug-related death among newly released prisoners in England and Wales. Addiction 2008;103(2): 251-5.

[9] National Institute for Health and Clinical Excellence. Drug misuse: opioid detoxification. London: NICE; 2007.

[10] Cornish R, et al. Risk of death during and after opiate substitution treatment in primary care: prospective observational study in UK General Practice Research Database. British Medical Journal 2010;341:c5475.

[11] Department of Health. Commissioning prison based substance misuse services 2011/12. London: Department of Health; 2011.

[12] National Treatment Agency for Substance Misuse. Club drugs: emerging trends and risks. London: NTA; 2012.

[13] Home Office. Guidance for local authorities on taking action against ‘head shops’ selling novel psychoactive substances (NPS); 2014.

[14] National Treatment Agency for Substance Misuse. Drug-related deaths: setting up a local review process. London: NTA; 2010.

[15] National Treatment Agency for Substance Misuse. Alerts and warning systems. http://www.nta.nhs.uk/healthcare-alerts.aspx (accessed 24 February 2014).

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